Exchange-Rate Dynamics Chapter 9

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Order Flows and the Macroeconomy

Outline:

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   i. Order Flow and Macro Information
   ii. Exchange Rate Returns and Order Flows
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   i. Measuring Macro Variables
   ii. Current Macro Conditions
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9.1 A Micro-Based Macro Model

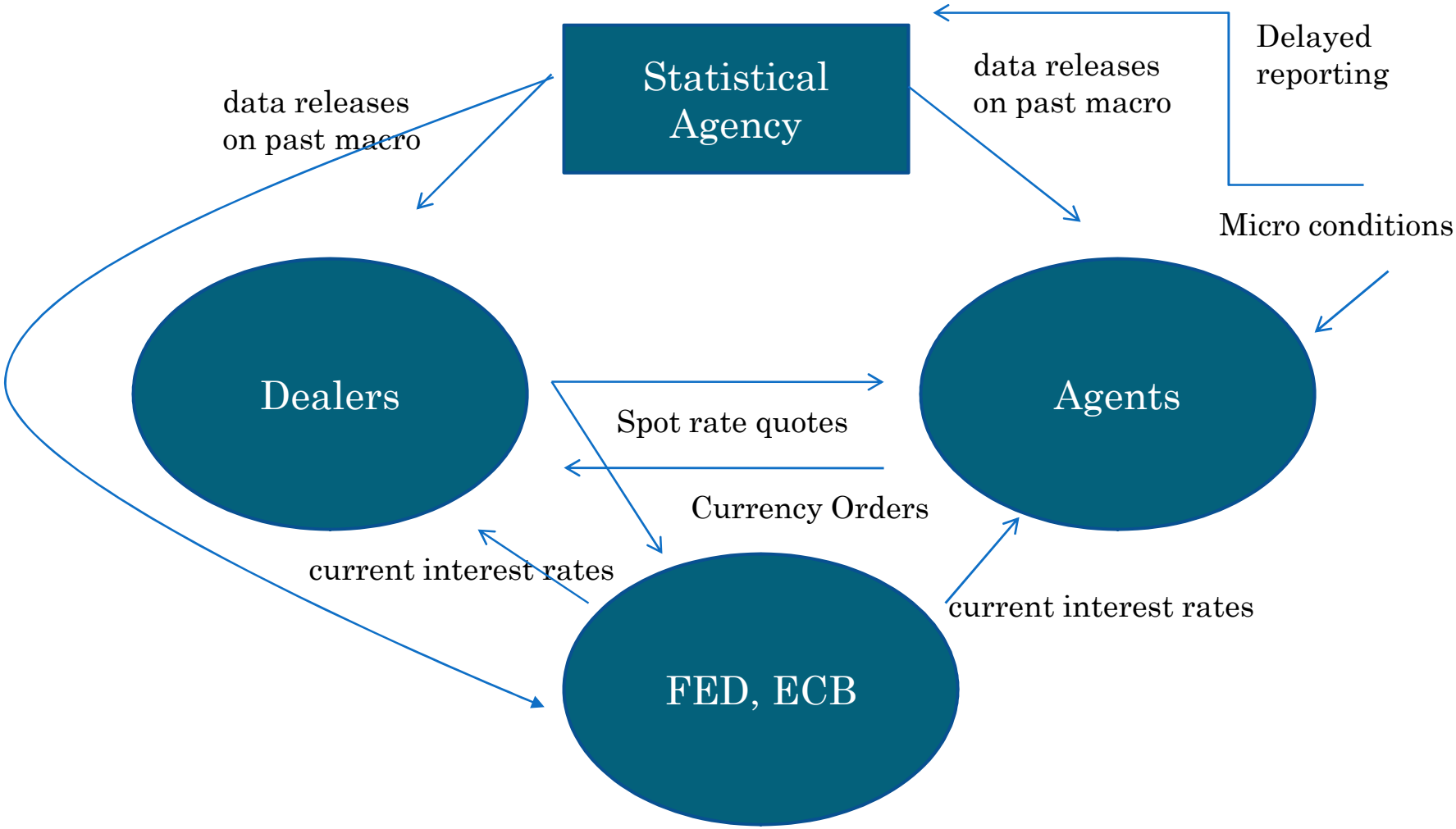
Structure

Table 1: Timing and Information Flows

Week	Event	Information Flow to Dealers	Information Flow to Agents
t	Data released on past macroeconomic activity and Central Banks set interest rates	z_t^m z_t^o	z_t^m z_t^o
	Each agent n observes her microeconomic environment		z_t^n
	Dealers quote log spot price		s_t
	Agents initiate trade against dealers' quotes producing aggregate order flow, which becomes known to all dealers via interdealer trading	x_{t+1}	
$t+1$			
$\vdots$			

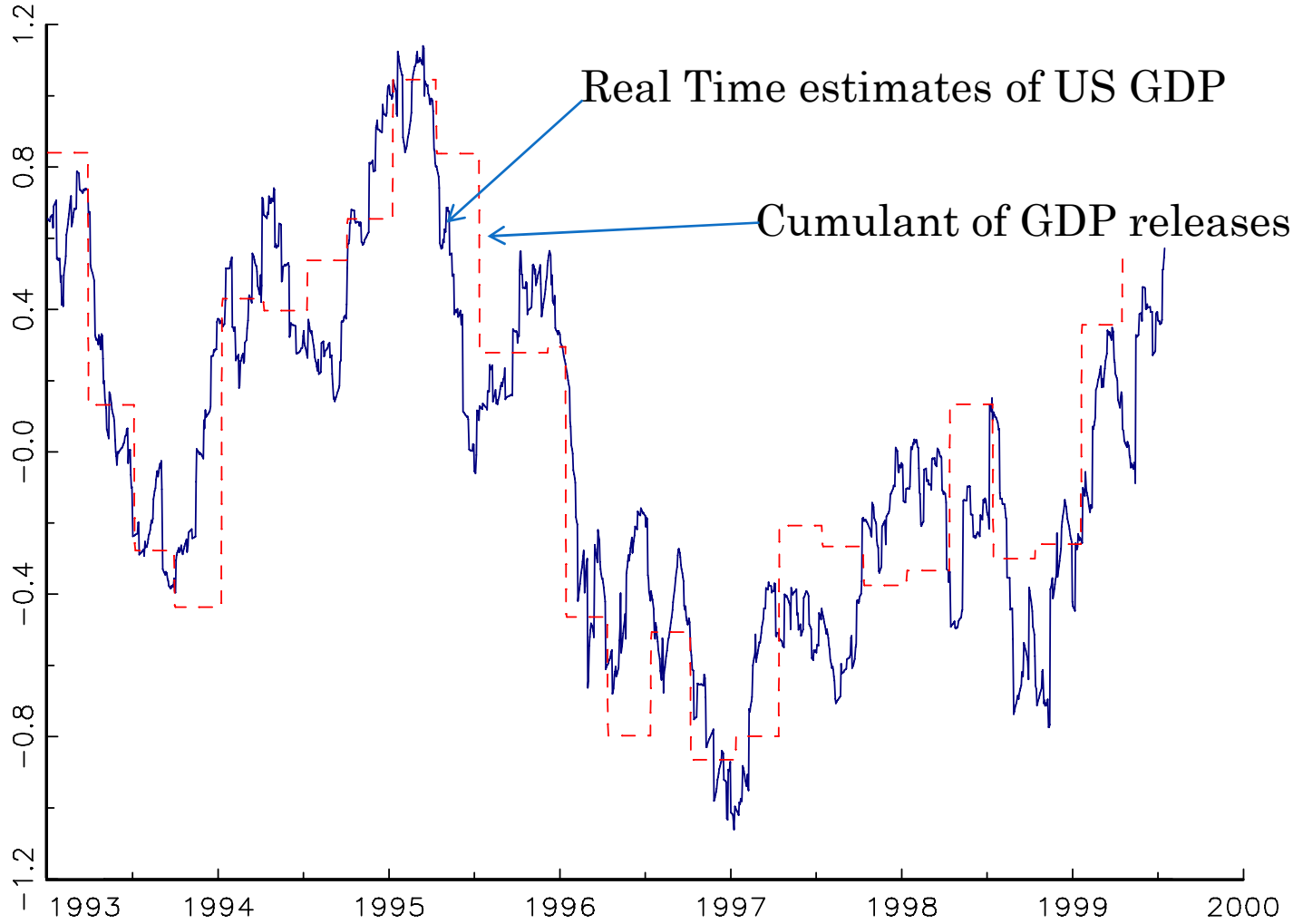
9.1 A Micro-Based Macro Model

Information Flows



9.3 Re-Examining the Disconnect Puzzle

Measuring Macro Variables



9.3 Re-Examining the Disconnect Puzzle

Current Macro Conditions

Table 2: USD/EUR Order Flows and Current Macro Information

Real-Time Error:	Corporate		Hedge		Investor		R^2
	US	Non-US	US	Non-US	US	Non-US	
A: US							
GDP	-0.530**	0.010	0.133**	0.109	0.428**	-0.256**	0.197
	(0.137)	(0.059)	(0.049)	(0.098)	(0.100)	(0.043)	
CPI	0.296	0.252**	-0.112**	-0.153	-0.572**	0.255**	0.157
	(0.181)	(0.054)	(0.048)	(0.098)	(0.107)	(0.046)	
M1	-0.243	-0.090	0.052	0.178*	0.255**	-0.242**	0.128
	(0.133)	(0.061)	(0.042)	(0.089)	(0.118)	(0.051)	
B: Germany							
GDP	0.106	0.100	0.120**	-0.147	-0.092	-0.065	0.029
	(0.175)	(0.064)	(0.058)	(0.093)	(0.143)	(0.052)	
CPI	-0.380**	-0.188**	0.048	0.045	-0.131	-0.068	0.018
	(0.144)	(0.049)	(0.047)	(0.109)	(0.106)	(0.048)	
M1	1.081**	0.146**	-0.122**	-0.043	0.101	0.182**	0.145
	(0.242)	(0.057)	(0.055)	(0.132)	(0.125)	(0.048)	

Notes: Source: Evans (2009). The table reports coefficients and standard errors from regression (9.48). The estimated coefficients on the order flows are multiplied by 1000. Estimates are calculated at the weekly frequency. The standard errors correct for heteroskedasticity. Statistical significance at the 5% and 1% level is denoted by * and **.

9.3 Re-Examining the Disconnect Puzzle

Current Macro Conditions

The second stage regressions take the form

$$er_{t+4}^{4} = \lambda_0 + \sum_{i=1}^{q} \lambda_i \widehat{\mathbb{E}}[\mathrm{Y}_{i,t}^{e} \mid X_t] + v_{t+\tau}$$

From Proposition 4,

$$er_{t+1} = \sum_{i=1}^{q} \lambda_i E[\mathrm{Y}_{i,t}^{e} \mid x_{t+1}] + \omega x_{t+1} + \xi_{t+1}$$

The R^2 statistic of 0.23 implies that 75% of the explanatory power of the order flows for excess returns is due to the information they convey concerning current GDP, the CPI and money. stocks.

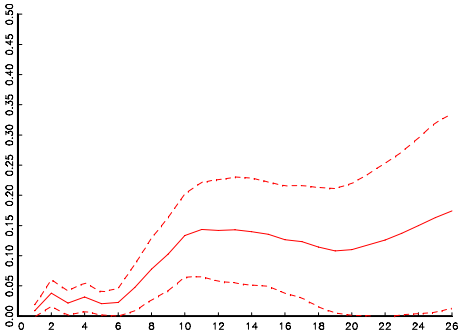
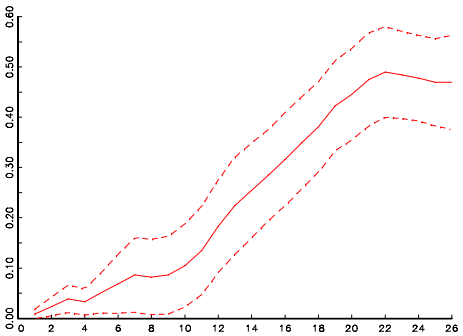
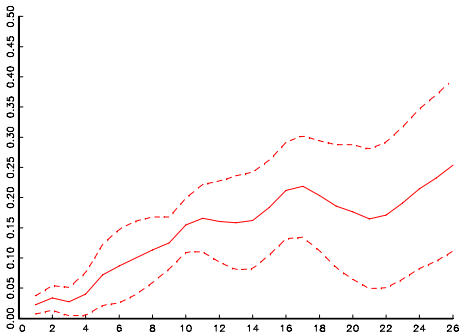
Table 3: Excess Returns and Real-Time Estimation Errors

	GDP		CPI		M1		R^2
	German	US	German	US	German	US	
A:							
	0.142	-0.681**					0.098
	(0.109)	(0.103)					
			0.500**	0.514**			0.112
			(0.202)	(0.112)			
					0.117	-0.704**	0.185
					(0.069)	(0.137)	
	0.137	-0 .110	-1.140	0.480	1.647	0.690	0.287
	(1.904)	(0.801)	(1.452)	(0.838)	(2.284)	(1.151)	
B:							
	0.427**						0.147
	(0.077)						
			-0.173**				0.044
			(0.038)				
					0.264**		0.113
					(0.042)		
	0.895**		0.517**		0.191		0.232
	(0.429)		(0.246)		(0.304)		

Source: Evans (2009). Notes: The table reports coefficients and standard errors from regression (9.49). Estimates are calculated at the weekly frequency. The standard errors correct for heteroskedasticity and an MA(3) error process. Statistical significance at the 5% and 1% level is denoted by * and **.

9.3 Re-Examining the Disconnect Puzzle

Future Macro Conditions

	GDP	Inflation	M1 Growth
US			
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